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FILE LAST UPDATED: 13 Jun 2007  (20070613/ED)

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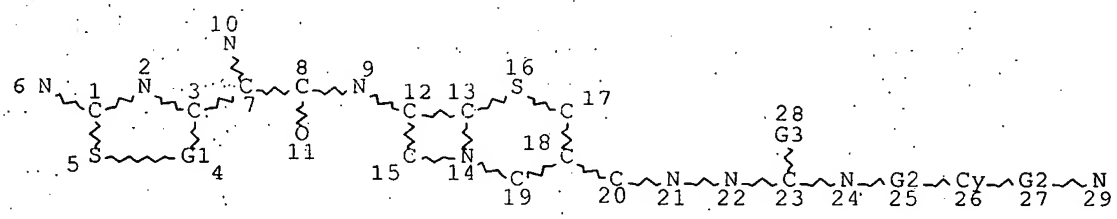

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L4   ANSWER 1 OF 3  HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2006:326378  HCAPLUS  Full-text
DOCUMENT NUMBER:          145:24086
```

TITLE: Mechanistic basis for the action of new cephalosporin antibiotics effective against methicillin- and vancomycin-resistant Staphylococcus aureus

AUTHOR(S): Fuda, Cosimo; Hesek, Dusan; Lee, Mijoon; Heilmayer, Werner; Novak, Rodger; Vakulenko, Sergei B.; Mobashery, Shahriar

CORPORATE SOURCE: Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN, 46556, USA

SOURCE: Journal of Biological Chemistry (2006), 281(15); 10035-10041
CODEN: JBCHA3; ISSN: 0021-9258

PUBLISHER: American Society for Biochemistry and Molecular Biology

DOCUMENT TYPE: Journal

LANGUAGE: English

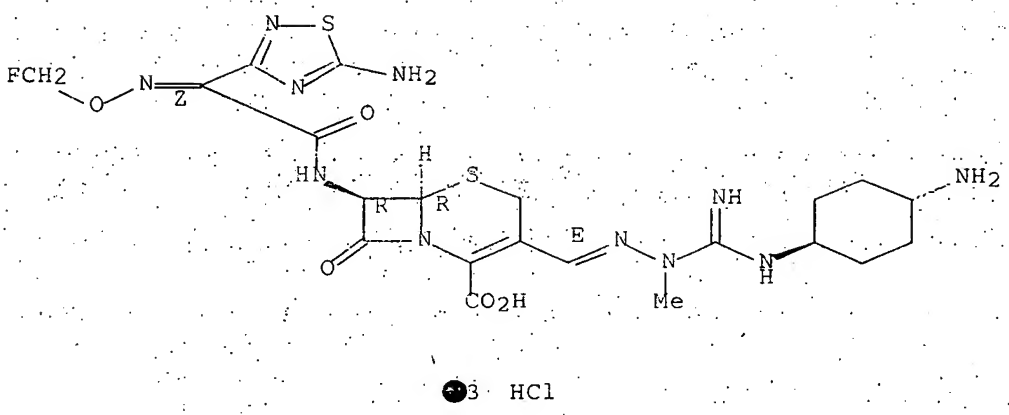
AB Emergence of methicillin-resistant Staphylococcus aureus (MRSA) has created challenges in treatment of nosocomial infections. The recent clin. emergence of vancomycin-resistant MRSA is a new disconcerting chapter in the evolution of these strains. S. aureus normally produces four PBPs, which are susceptible to modification byβ-lactam antibiotics, an event that leads to bacterial death. The gene product of mecA from MRSA is a penicillin-binding protein (PBP) designated PBP 2a. PBP 2a is refractory to the action of all com. available β-lactam antibiotics. Furthermore, PBP 2a is capable of taking over the functions of the other PBPs of S. aureus in the face of the challenge by β-lactam antibiotics. Three cephalosporins (compds. 1-3) have been studied herein, which show antibacterial activities against MRSA, including the clin. important vancomycin-resistant strains. These cephalosporins exhibit substantially smaller dissociation consts. for the preacylation complex compared with the case of typical cephalosporins, but their pseudo-second-order rate consts. for encounter with PBP 2a (k2/Ks) are not very large (≤200 M-1 s-1). It is documented herein that these cephalosporins facilitate a conformational change in PBP 2a, a process that is enhanced in the presence of a synthetic surrogate for cell wall, resulting in increases in the k2/Ks parameter and in more facile enzyme inhibition. These findings argue that the novel cephalosporins are able to co-opt interactions between PBP 2a and the cell wall in gaining access to the active site in the inhibition process, a set of events that leads to effective inhibition of PBP 2a and the attendant killing of the MRSA strains.

IT ***650590-51-5***, ABRI 2901
RL: BSU (Biological study, unclassified); BIOL (Biological study) (mechanistic basis for action of new cephalosporin antibiotics effective against methicillin- and vancomycin-resistant Staphylococcus aureus)

RN 650590-51-5 HCAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



3 HCl

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:648529 HCAPLUS Full-text
DOCUMENT NUMBER: 141:190629
TITLE: Preparation of cephalosporin ester derivatives for use in pharmaceutical compositions for the treatment of microbial infections
INVENTOR(S): Ascher, Gerd; Thirring, Klaus
PATENT ASSIGNEE(S): Sandoz GmbH, Austria; Sandoz AG
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004067536	A2	20040812	WO 2004-EP683	20040127
WO 2004067536	A3	20041223		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI				
CA 2509793	A1	20040812	CA 2004-2509793	20040127
EP 1590354	A2	20051102	EP 2004-705412	20040127
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2004007073	A	20060124	BR 2004-7073	20040127
CN 1745086	A	20060308	CN 2004-80003021	20040127
JP 2006515633	T	20060601	JP 2006-501619	20040127
US 2006122164	A1	20060608	US 2005-541017	20050628
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			WO 2004-EP683 W	20040127

OTHER SOURCE(S): MARPAT 141:190629
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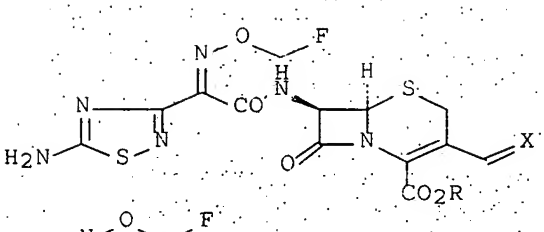

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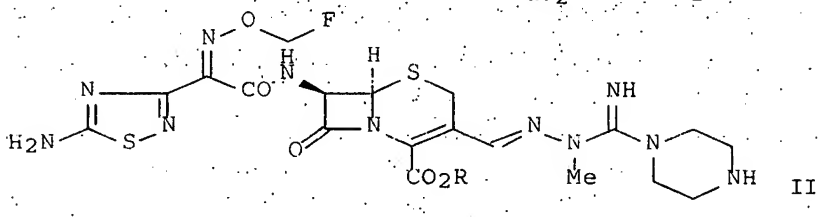


II

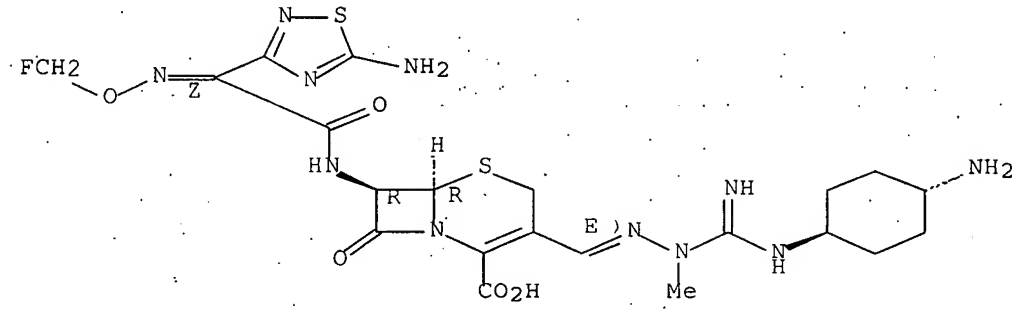
AB Cephalosporin esters, such as I [R = substituted alkyl ester group; X = substituted hydrazono, guanidino, or semicarbazido group], were prepared for therapeutic use as antibiotics and may be used in combination with an immunosuppressant, immunomodulator, or anti-inflammatory agent. Thus, cephalosporin ester II [R = -CH(Me)OC(O)OCH2CH(OH)CH2OH] was prepared via a series of synthetic steps which included ester formation of the corresponding 3-formyl substituted acid sodium salt I (R = Na, X = O) with carbonic acid diester MeCH(I)OC(O)OCH2CH(OR1)CH2OR2 (R1R2 = CMe2), followed by reaction of the cyclic-diprotected diol ester with 1-piperazinecarboximidic acid, 1-methylhydrazide using 2N HCl to in install the desired hydrazono group, and finally, deprotection of the diol functionality in the ester moiety again using HCl to form the target cephalosporin ester. Appropriate dosages and pharmaceutical formulation of the prepared esters were discussed.

IT *650590-51-5P*
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of cephalosporin ester β-lactam antibiotics for use in pharmaceutical compns. for the treatment of microbial infections)

RN 650590-51-5 HCAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

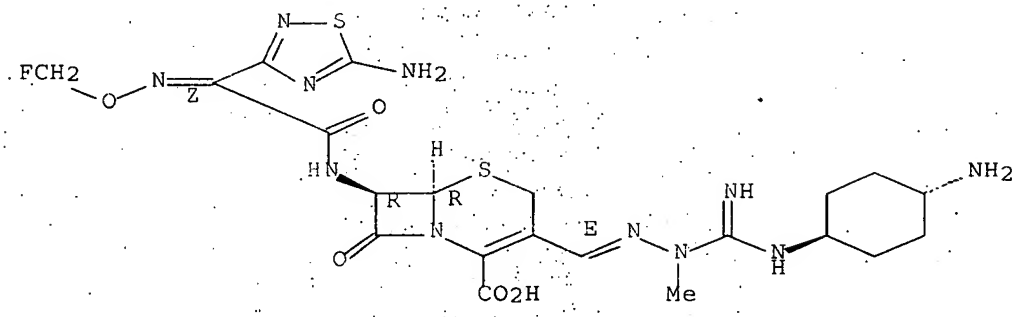


●3 HCl

IT *648908-95-6P 737805-19-5P 737805-20-8P*
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of cephalosporin ester β-lactam antibiotics for use in pharmaceutical compns. for the treatment of microbial infections)

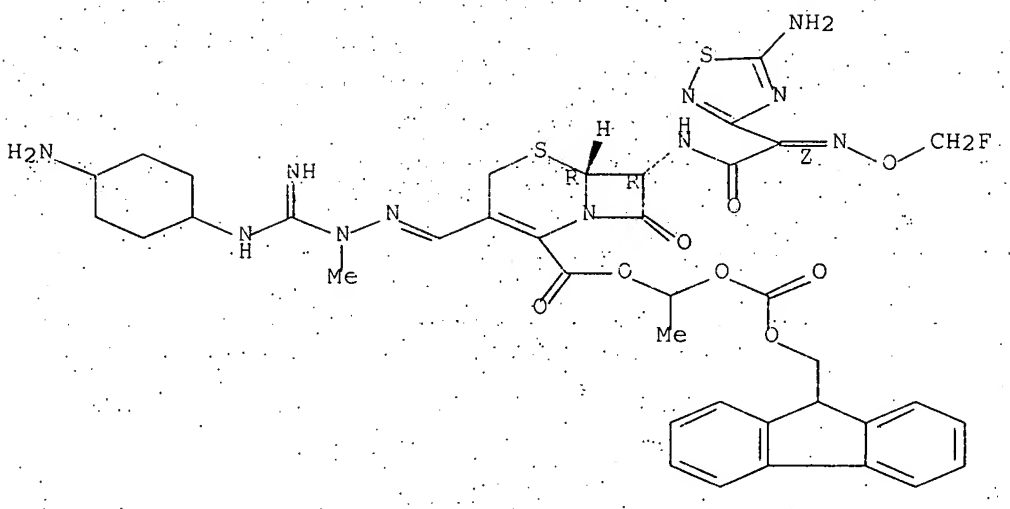
RN 648908-95-6 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



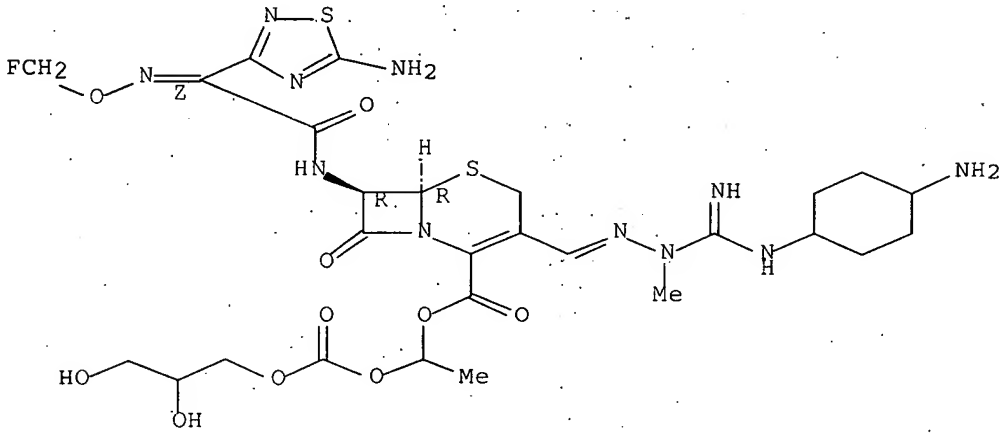
RN 737805-19-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[[(4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, 1-[[(9H-fluoren-9-ylmethoxy)carbonyl]oxy]ethyl ester, (6R,7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



RN 737805-20-8 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[[(4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, 1-[[(2,3-dihydroxypropoxy)carbonyl]oxy]ethyl ester, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



L4 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:60517 HCAPLUS Full-text
DOCUMENT NUMBER: 140:128191
TITLE: Preparation of acylamino(methylhydrazono)methylcephalosporin derivatives for the treatment of microbial diseases
INVENTOR(S): Ascher, Gerd; Heilmayer, Werner; Schranz, Michael; Wieser, Josef
PATENT ASSIGNEE(S): Sandoz GmbH, Austria
SOURCE: PCT Int. Appl., 55 pp.

This case

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2004007505	A1	20040122	WO 2003-EP7603		20030714
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RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR					
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AU 2003250056	A1	20040202	AU 2003-250056		20030714
BR 2003012698	A	20050503	BR 2003-12698		20030714
EP 1529050	A1	20050511	EP 2003-763841		20030714
EP 1529050	B1	20060524			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
CN 1678616	A	20051005	CN 2003-819975		20030714
JP 2005536499	T	20051202	JP 2004-520619		20030714
AT 327239	T	20060615	AT 2003-763841		20030714
IN 2004CN03075	A	20060217	IN 2004-CN3075		20041231
NO 2005000781	A	20050214	NO 2005-781		20050214
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			GB 2002-23976	A	20021015
			GB 2002-23977	A	20021015
			WO 2003-EP7603	W	20030714
OTHER SOURCE(S):	MARPAT 140:128191				

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The present invention discloses preparation of acylamino(methylhydrazono)methyl cephalosporin derivs., such as I or II [W = CH, N; R1 = OH, alkoxy; R2 = H, ester; R3 = H, alkyl, alkenyl, cycloalkyl; R4 = H, alkyl; A = cyclohexyl, phenyl; R5, R6 = H, alkyl, alkenyl, arylcarbonyl, alkylcarbonyl, heterocyclylalkylcarbonyl; X = NH, O, S, alkylamino, cycloalkylamino; R8 = alkyl; Y = O, S; m, n = 0-1], for their therapeutic use as antimicrobial agents. Thus, cephalosporin trans-diaminocyclohexane derivative III.HCl is prepared via a multistep synthetic sequence starting from S-methyl-2-methyl-isothiosemicarbazide hydrochloride, trans-1,4-diaminocyclohexane and N-(1,4,5a,6-tetrahydro-3-hydroxy-1,7-dioxo-3H,7H-azeto(2,1-b)furo(3,4-d)(1,3)thiazin-6-yl)-2-(5-amino-1,2,4-thiadiazol-3- yl)-(Z)-2-fluoromethoxyiminoacetic acid amide.

IT *648906-72-3P 648906-73-4P 648906-74-5P*

648906-75-6P 648906-76-7P 648906-77-8P
648906-78-9P 648906-79-0P 648906-80-3P
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650590-39-9P 650590-41-3P 650590-43-5P
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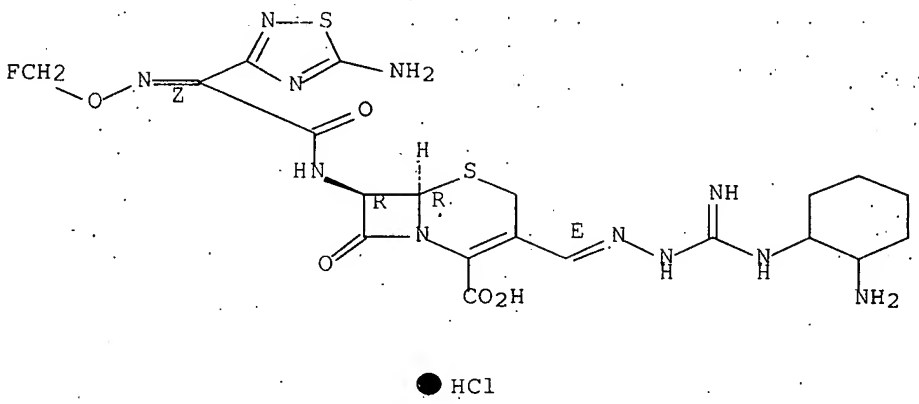
650590-53-7P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of acylamino(methylhydrazono)methylcephalosporin derivs. as antimicrobial agents and their intermediates)

RN 648906-72-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(2-aminocyclohexyl)amino]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



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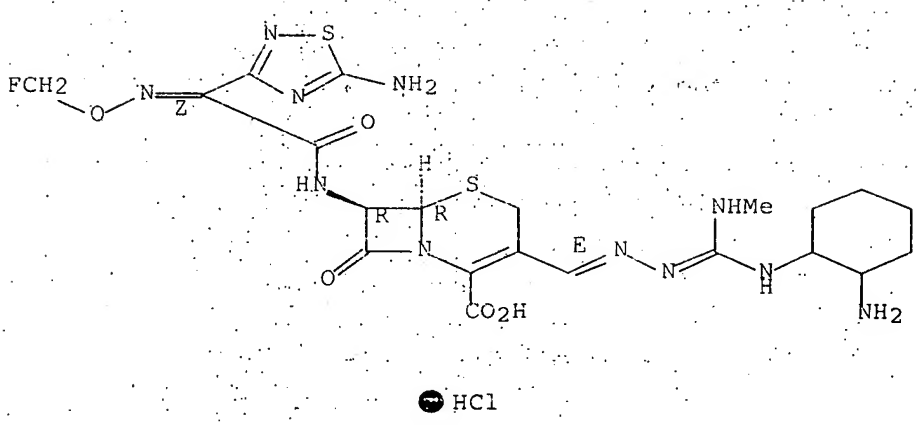
Absolute stereochemistry.
Double bond geometry as shown.



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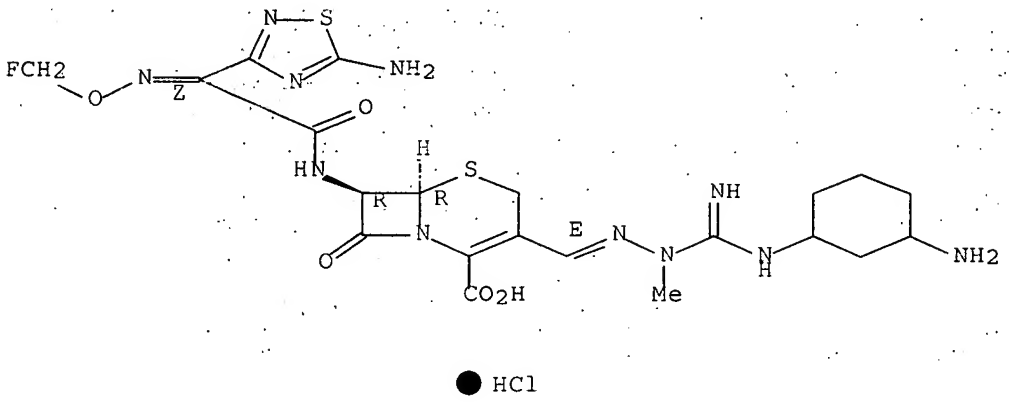
Absolute stereochemistry.
Double bond geometry as shown.



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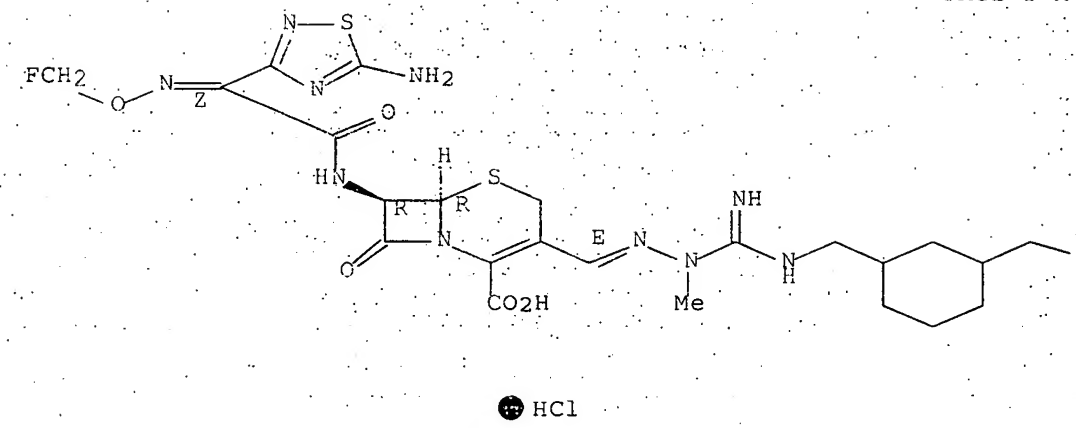
Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

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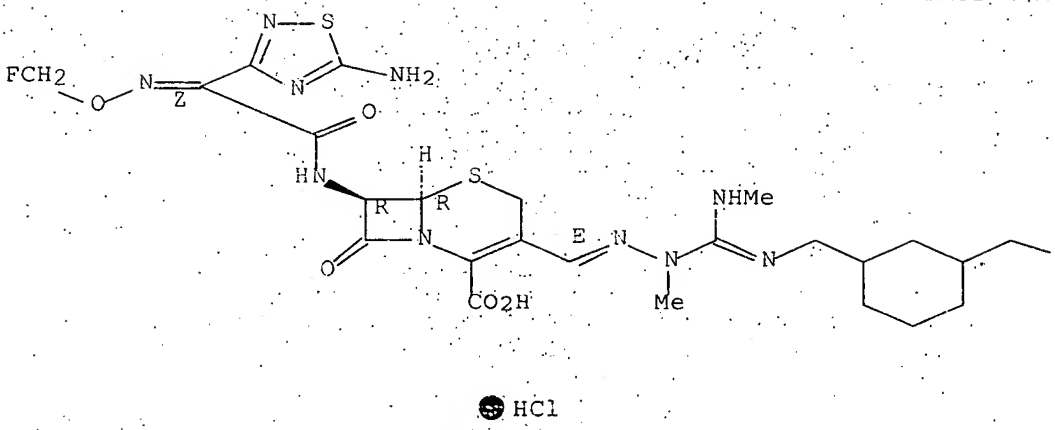
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[[[3-(aminomethyl)cyclohexyl]methyl]amino](methylimino)methyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A

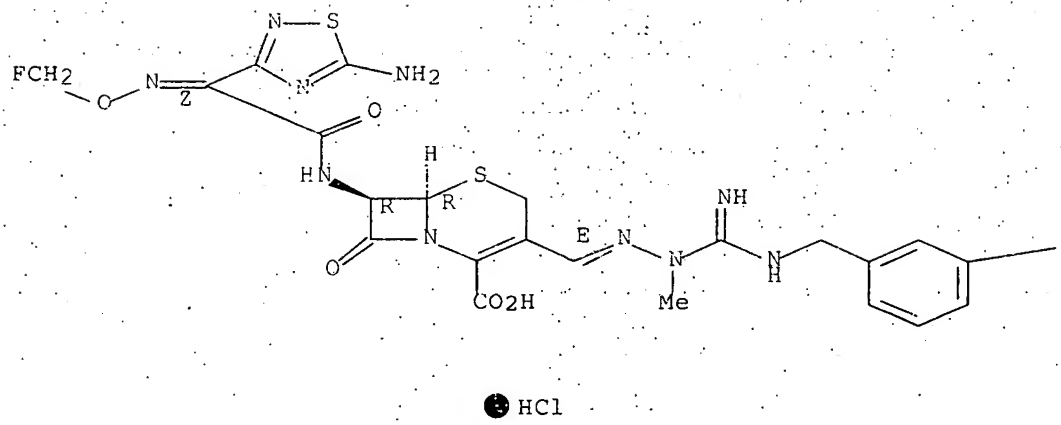


PAGE 1-B

RN 648906-77-8 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[[(3-aminophenyl)methyl]amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



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RN 648906-78-9 HCAPLUS
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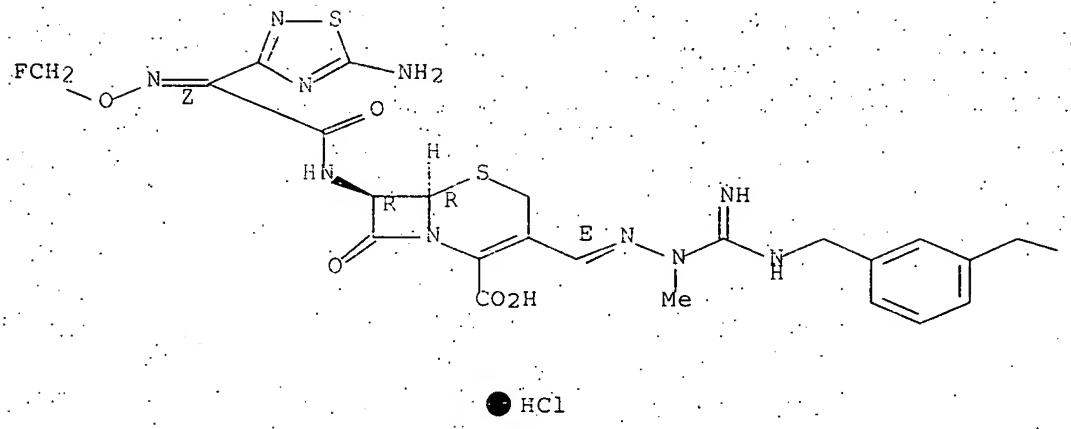
Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A

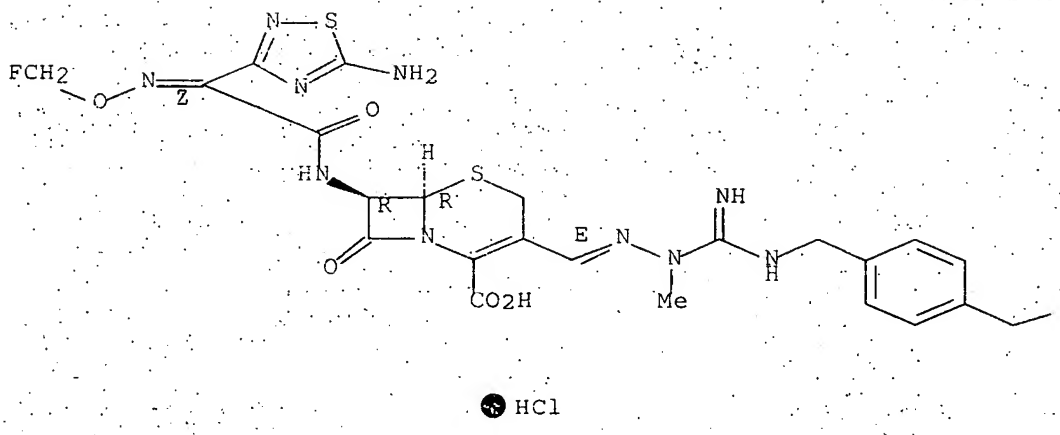


PAGE 1-B

RN 648906-79-0 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[[4-(aminomethyl)phenyl]methyl]amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

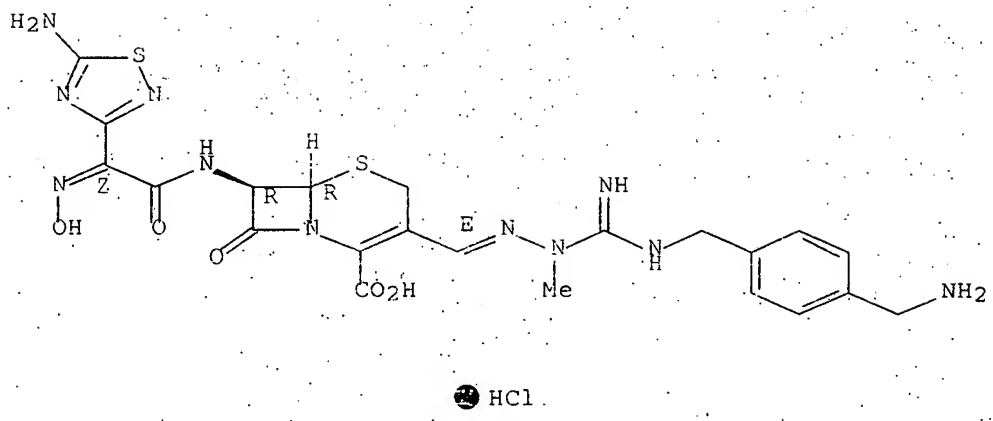
PAGE 1-A



PAGE 1-B

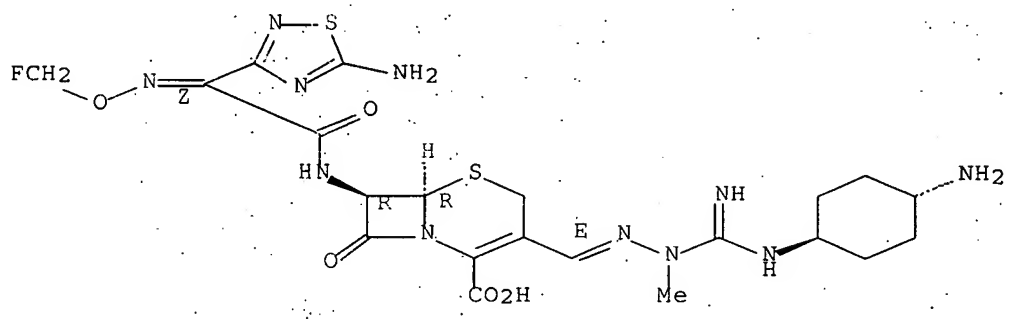
RN 648906-80-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[[4-(aminomethyl)phenyl]methyl]amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)(hydroxyimino)acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



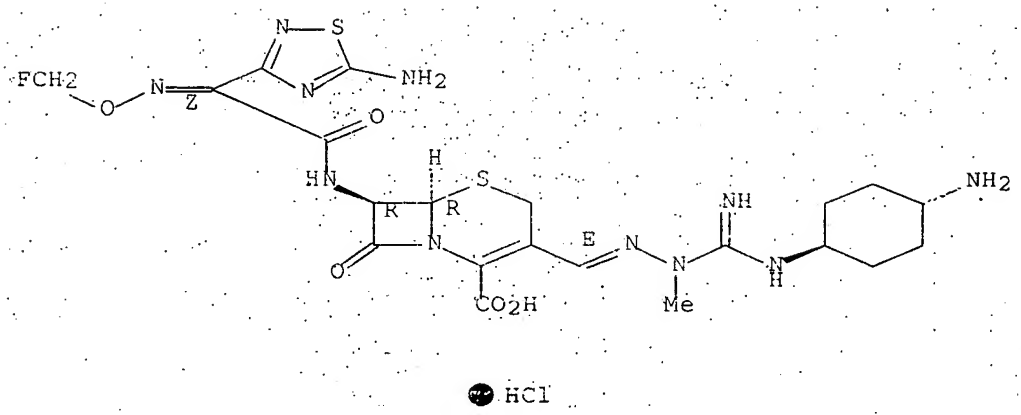
RN 648908-95-6 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



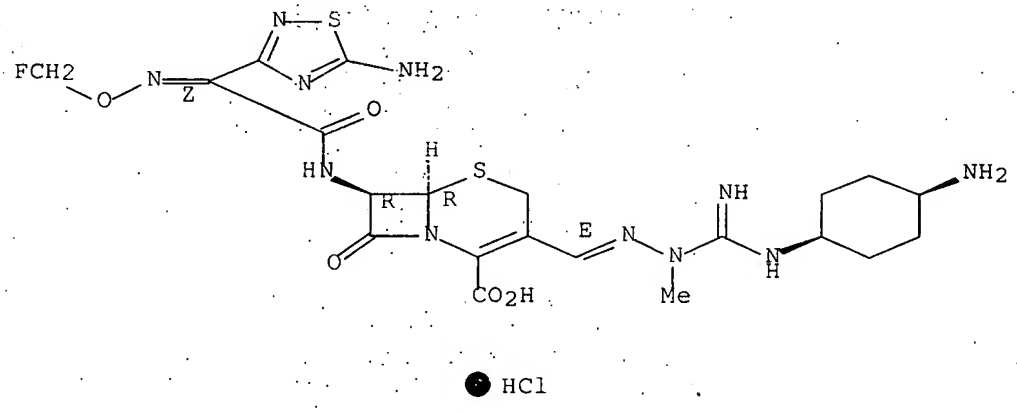
RN 650589-68-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



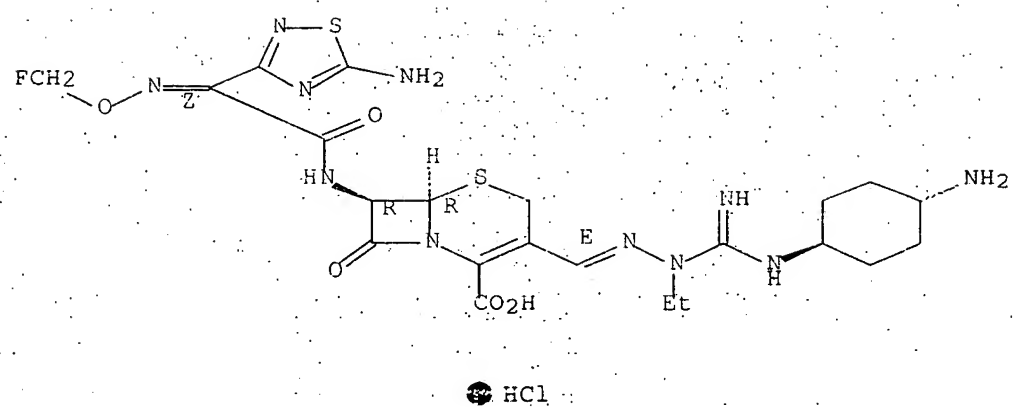
RN 650589-70-1 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(cis-4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



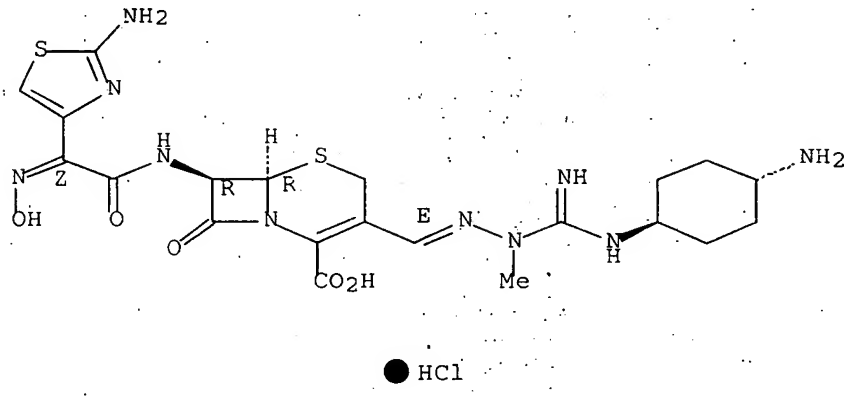
RN 650589-72-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]ethylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



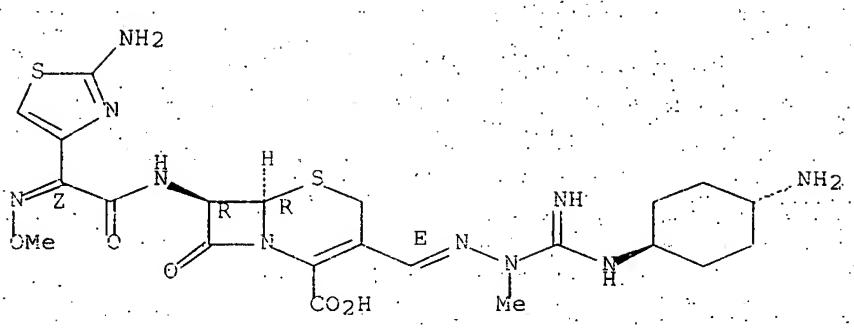
RN 650589-74-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 650589-76-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

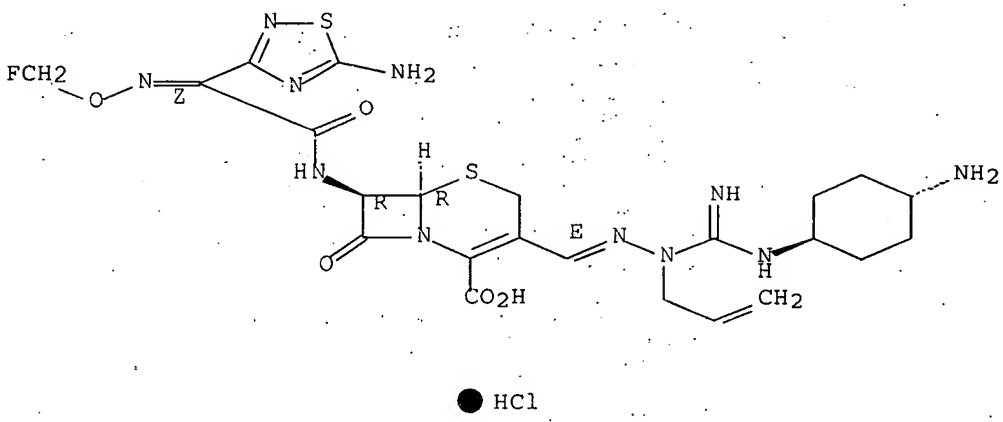
Absolute stereochemistry.
Double bond geometry as shown.



● HCl

RN 650589-78-9 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]-2-propenylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

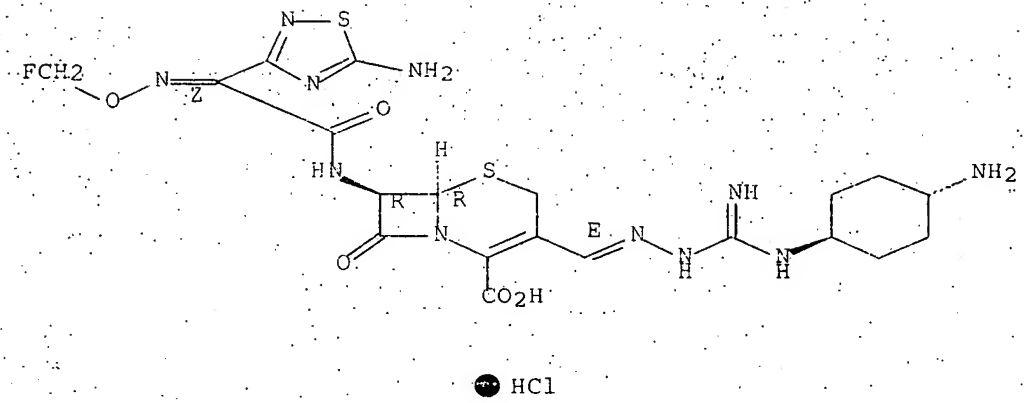
Absolute stereochemistry.
Double bond geometry as shown.



● HCl

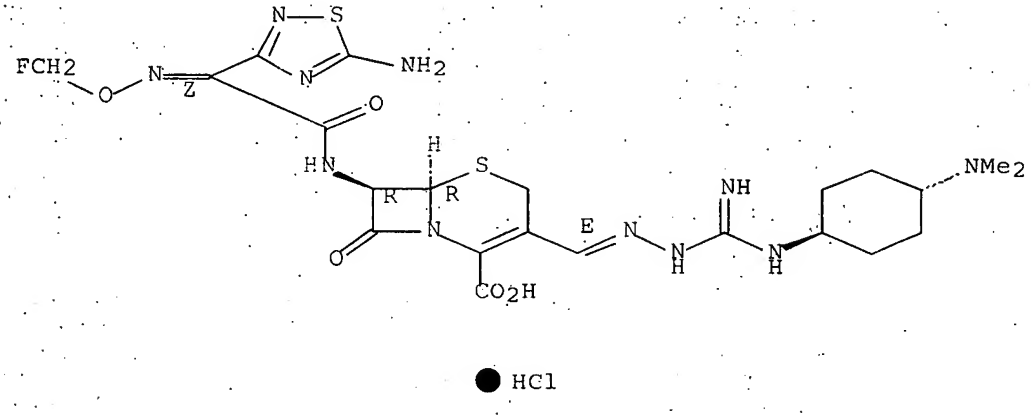
RN 650589-80-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



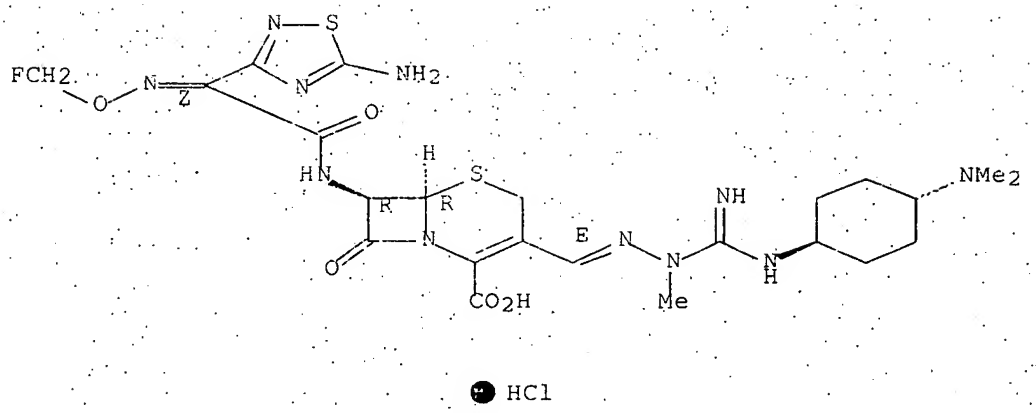
RN 650589-82-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[[[trans-4-(dimethylamino)cyclohexyl]amino]iminomethyl]hydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 650589-84-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[[[trans-4-(dimethylamino)cyclohexyl]amino]iminomethyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



● HCl

RN 650589-86-9 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[[trans-4-[[(4-aminophenyl)sulfonyl]amino]cyclohexyl]amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

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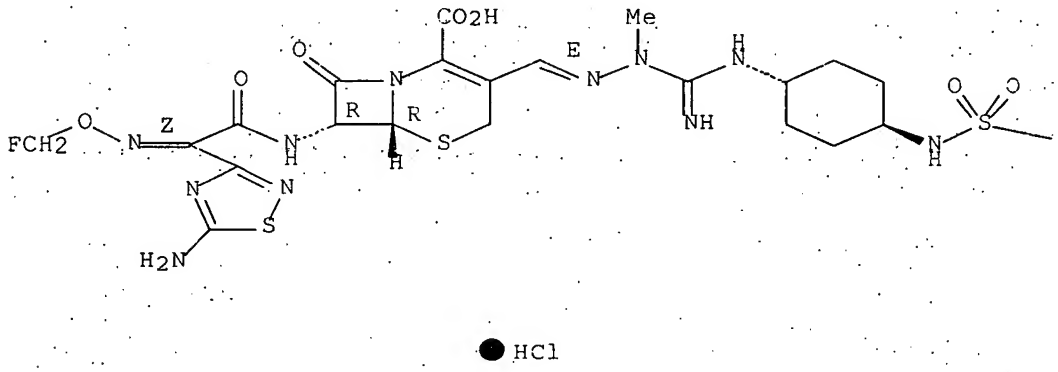
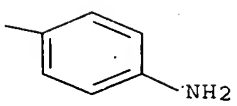


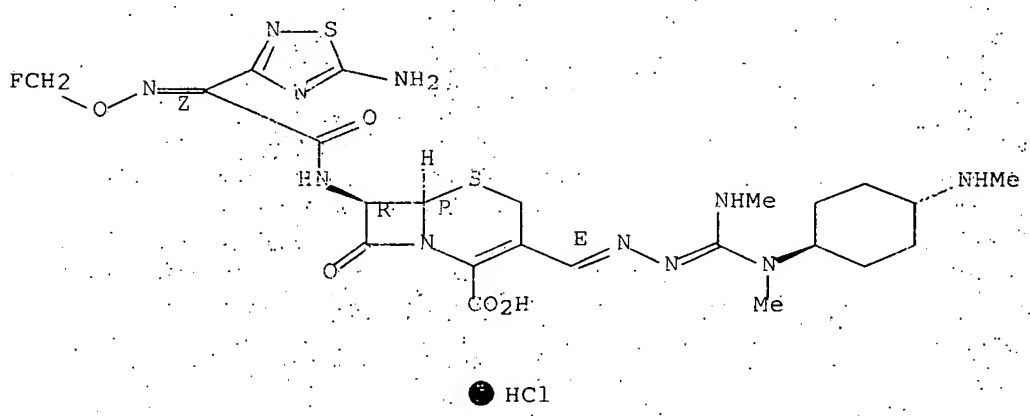
● HCl

PAGE 1-B



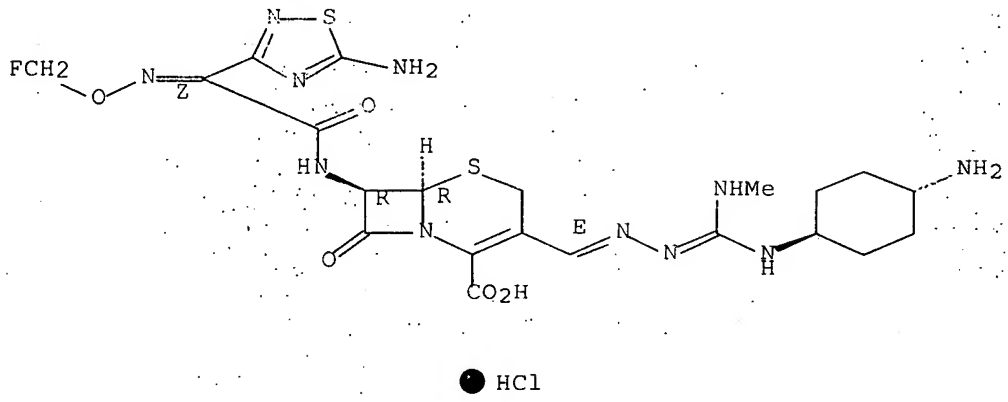
RN 650589-88-1 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[(methylamino)[methyl[trans-4-(methylamino)cyclohexyl]amino]methylene]hydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 650589-90-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino](methylamino)methylene]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

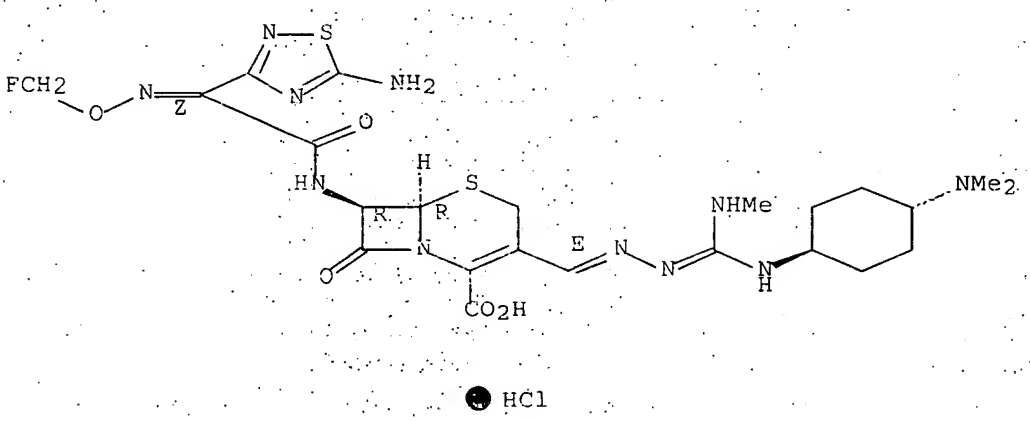
Absolute stereochemistry.
Double bond geometry as shown.



RN 650589-92-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[[[trans-4-(dimethylamino)cyclohexyl]amino](methylamino)methylen

e]hydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



● HCl

RN 650589-95-0 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(2-amino-4-thiazolyl)[(1-carboxy-1-methylethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

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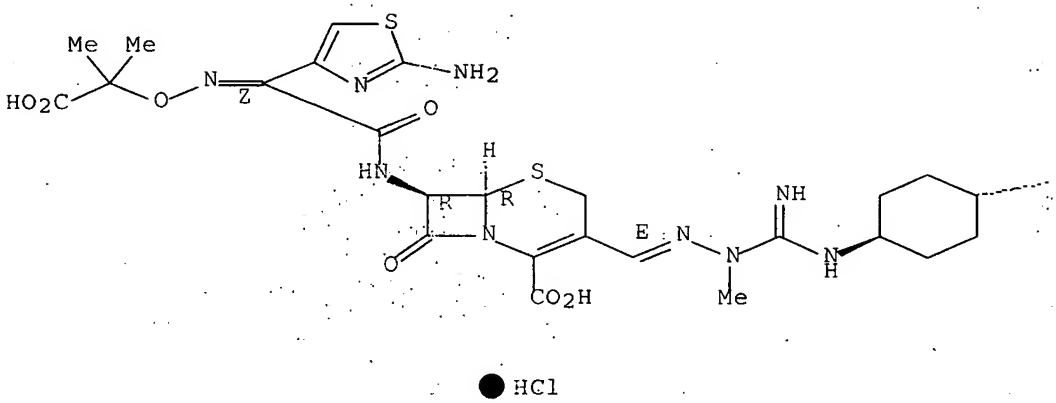
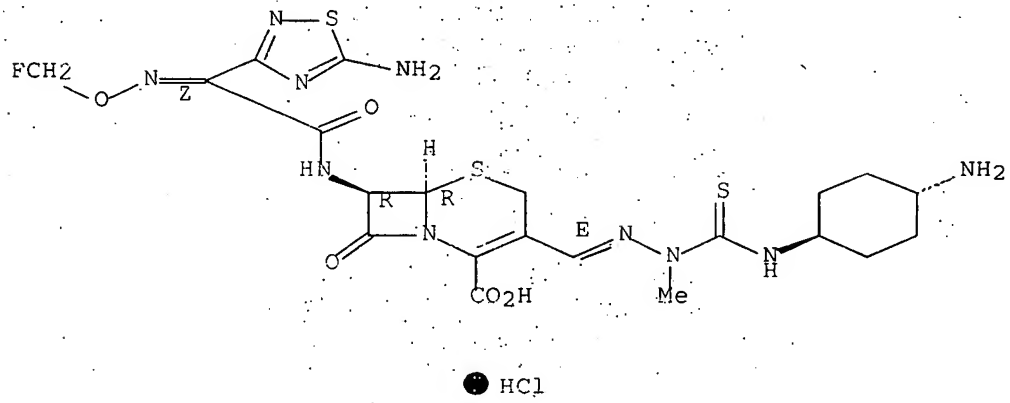


● HCl

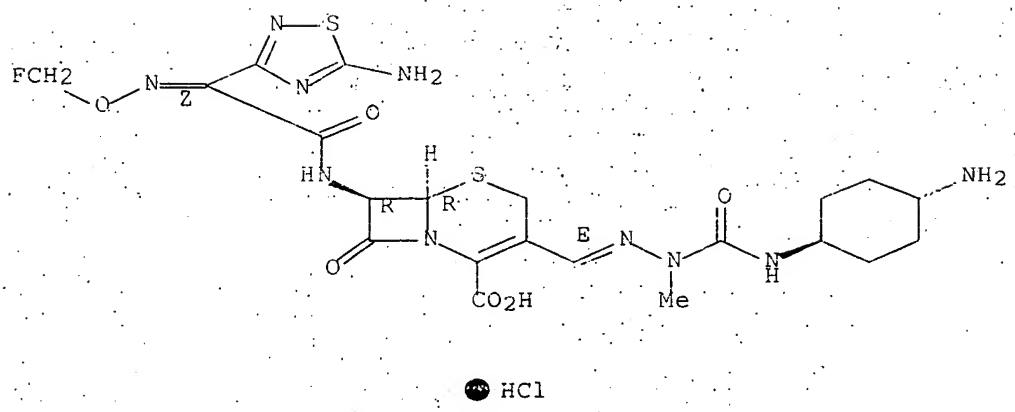
RN 650589-97-2 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]thioxomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



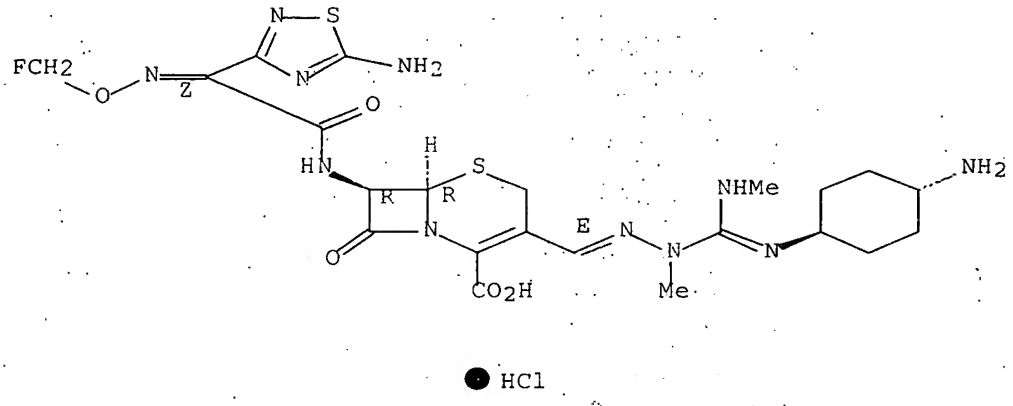
RN 650589-99-4 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]carbonyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



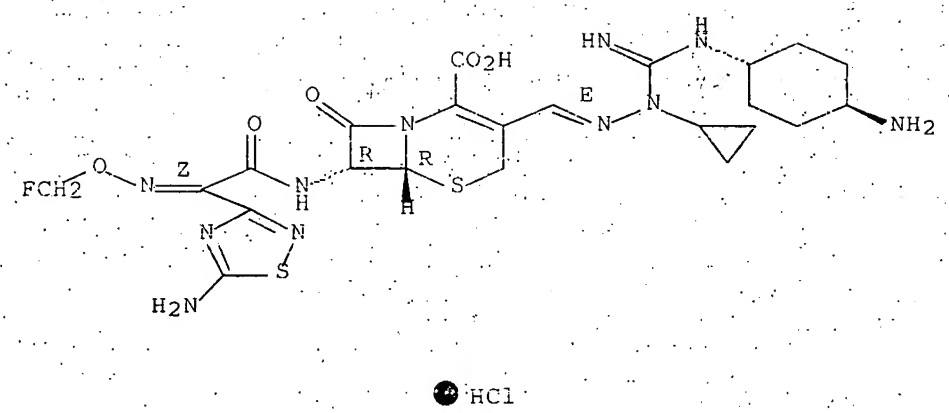
RN 650590-01-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino](methylimino)methyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



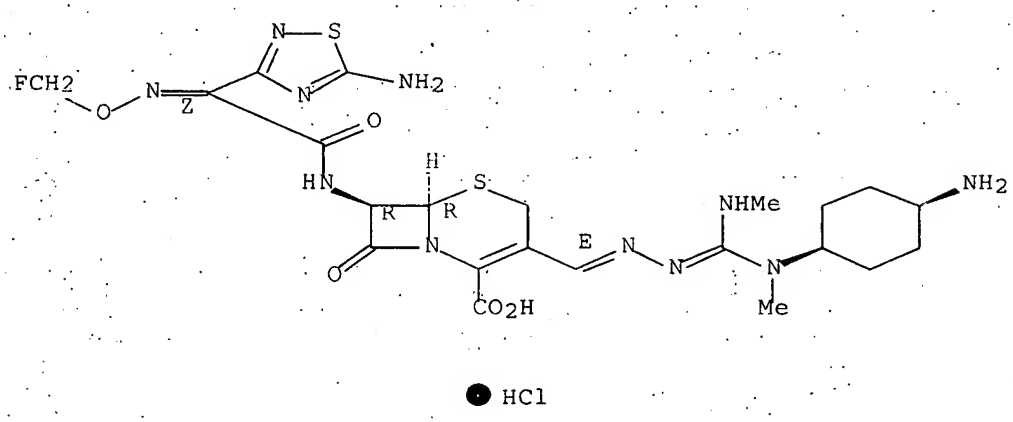
RN 650590-03-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]cyclopropylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



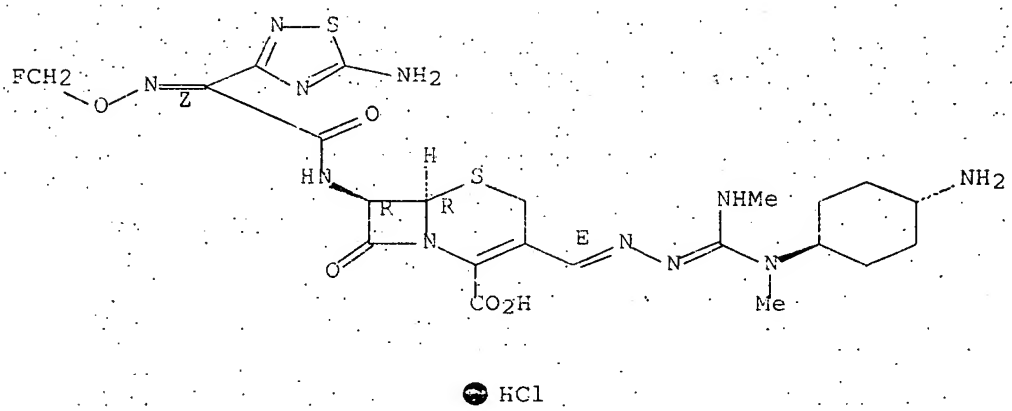
RN 650590-05-9 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(cis-4-aminocyclohexyl)methylamino](methylamino)methylene]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



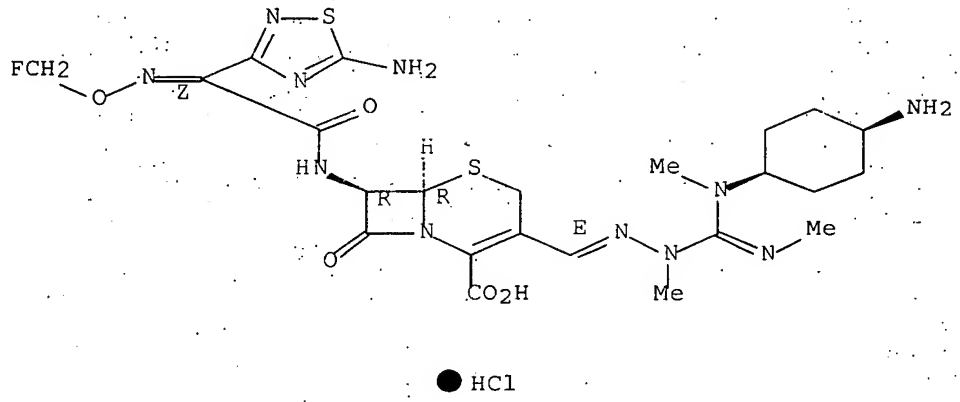
RN 650590-07-1 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)methylamino](methylamino)methylene]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 650590-09-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(cis-4-aminocyclohexyl)methylamino](methylimino)methyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



RN 650590-11-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[imino[[trans-4-(2-propenylamino)cyclohexyl]amino]methyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

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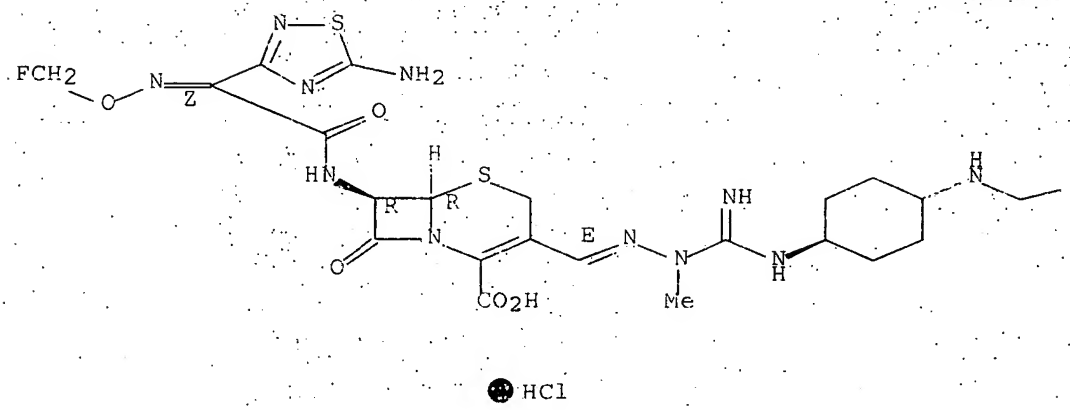

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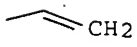
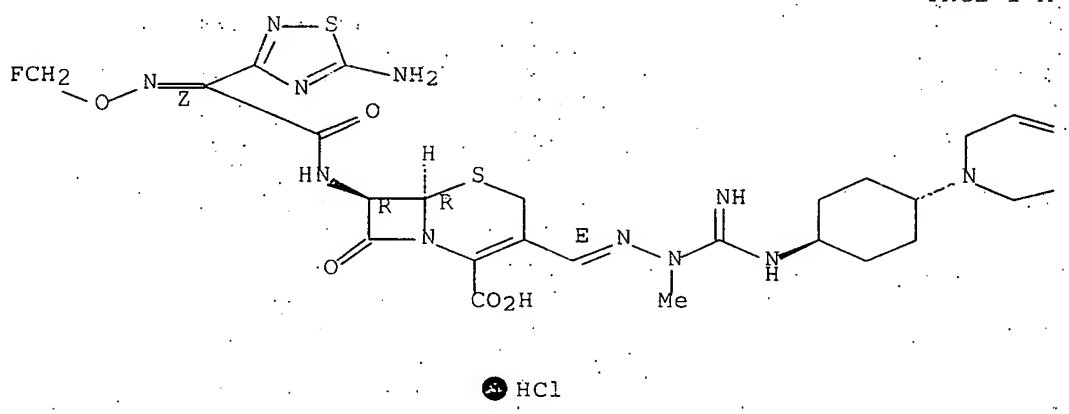


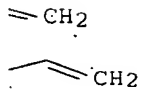
RN 650590-13-9 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[[[trans-4-(di-2-propenylamino)cyclohexyl]amino]iminomethyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



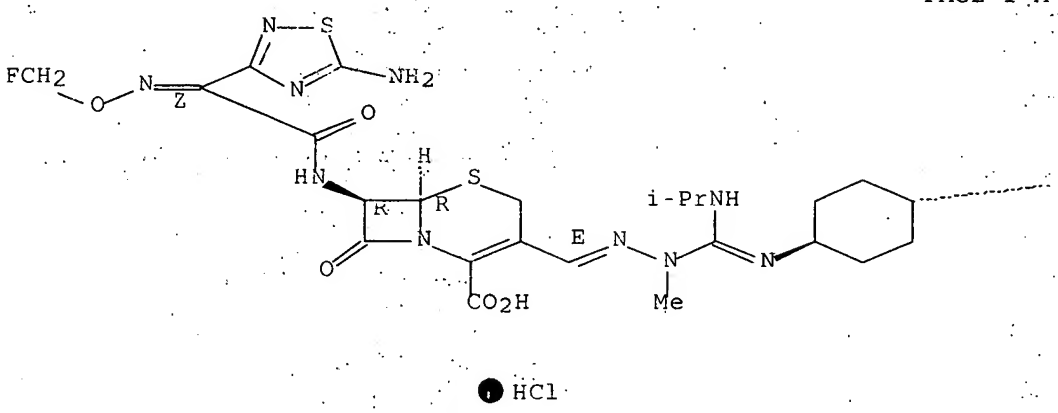
PAGE 1-B



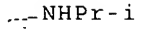
RN 650590-15-1 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[methyl[[[trans-4-[(1-methylethyl)amino]cyclohexyl]amino][(1-methylethyl)imino]methyl]hydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



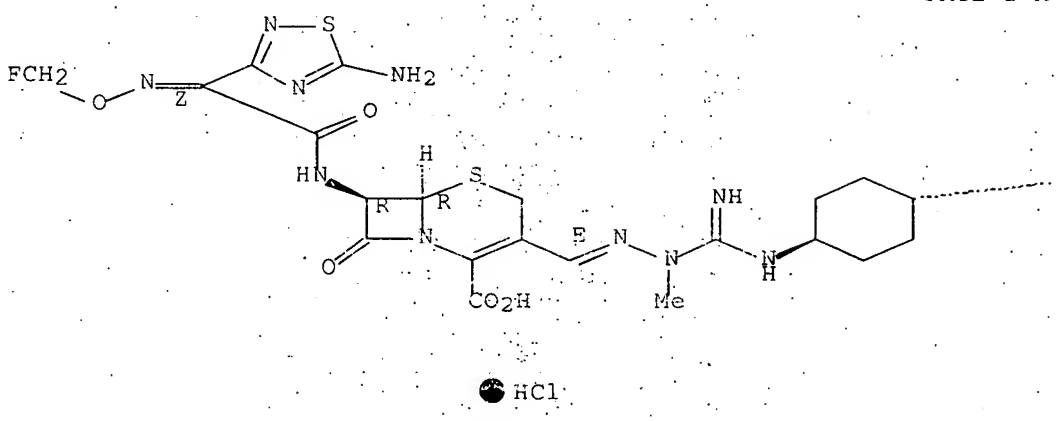
PAGE 1-B



RN 650590-17-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[imino[[trans-4-[(1-methylethyl)amino]cyclohexyl]amino]methyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A

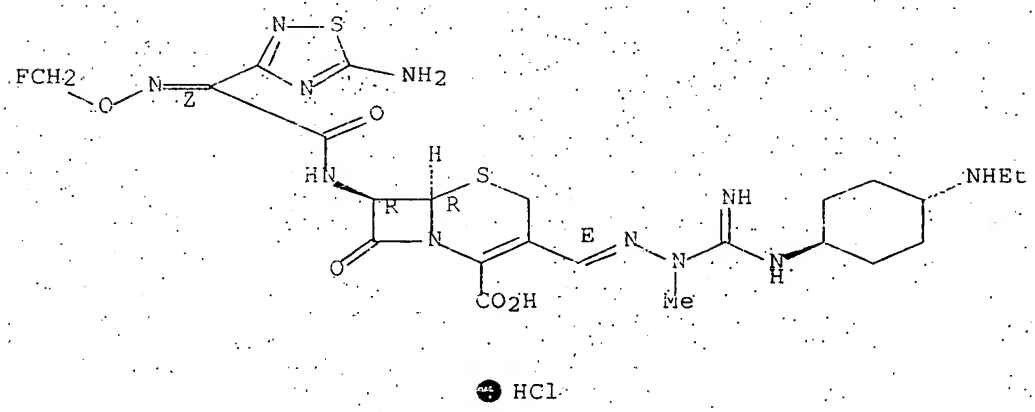


PAGE 1-B

NHPr-i

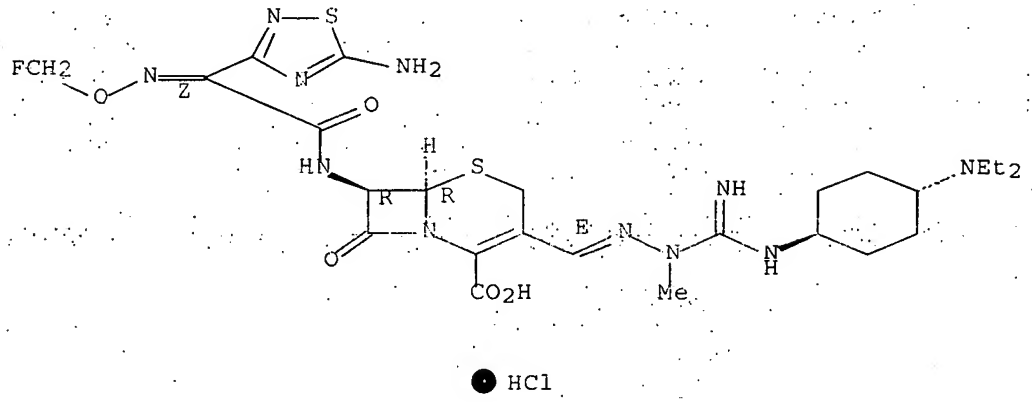
RN 650590-19-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[[[trans-4-(ethylamino)cyclohexyl]amino]iminomethyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 650590-21-9 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[[[trans-4-(diethylamino)cyclohexyl]amino]iminomethyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

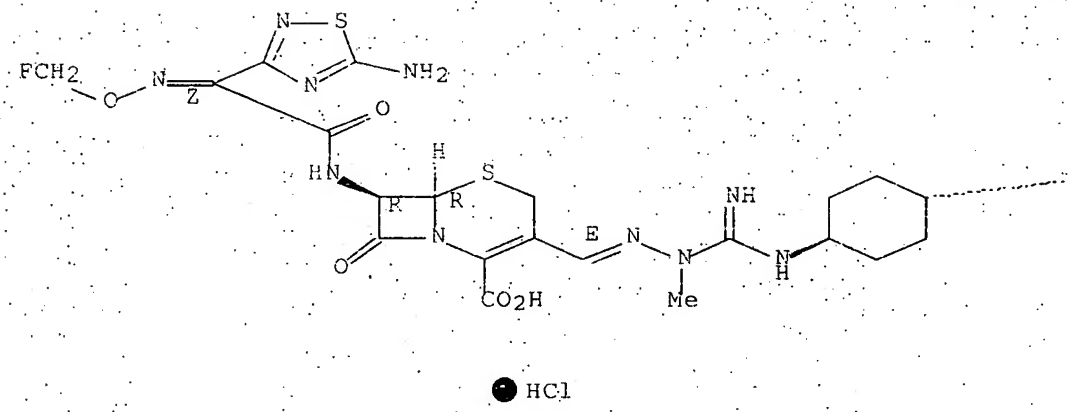
Absolute stereochemistry.
Double bond geometry as shown.



RN 650590-23-1 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[imino[[trans-4-(propylamino)cyclohexyl]amino]methyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



● HCl

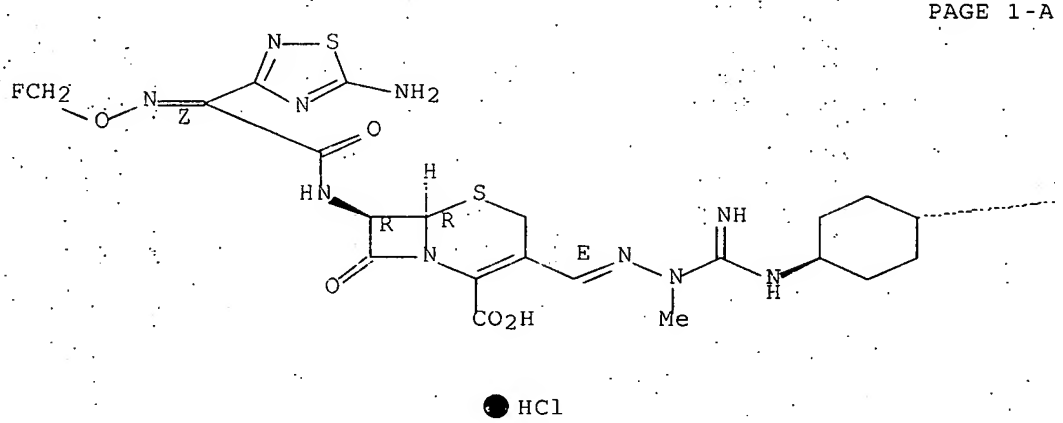
PAGE 1-B

---NHPr-n

RN 650590-25-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[[[trans-4-(dipropylamino)cyclohexyl]amino]iminomethyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A

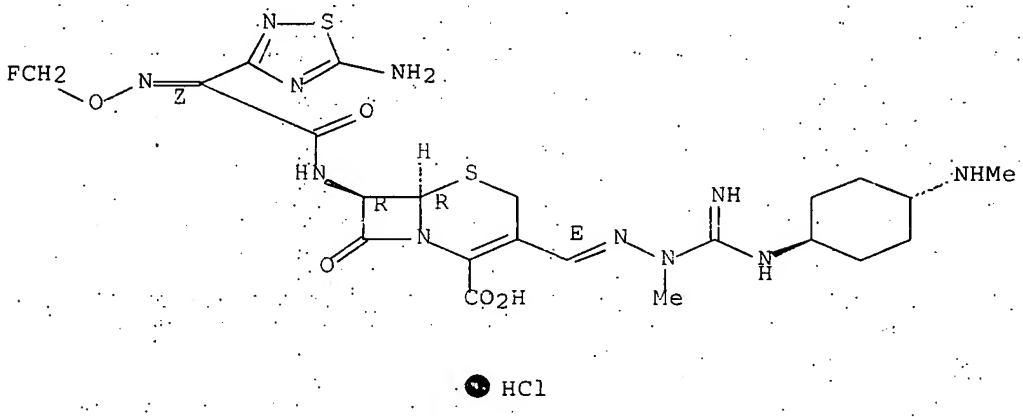


● HCl

---N(Pr-n)2

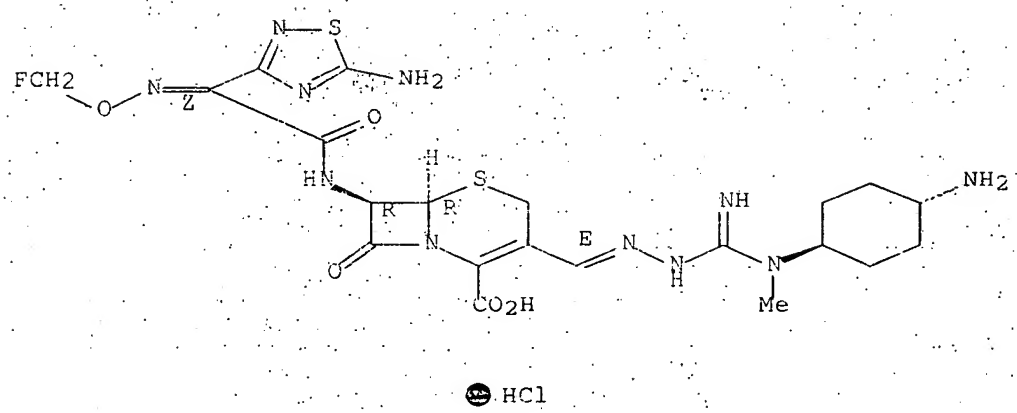
RN 650590-27-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[imino[[trans-4-(methylamino)cyclohexyl]amino]methyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



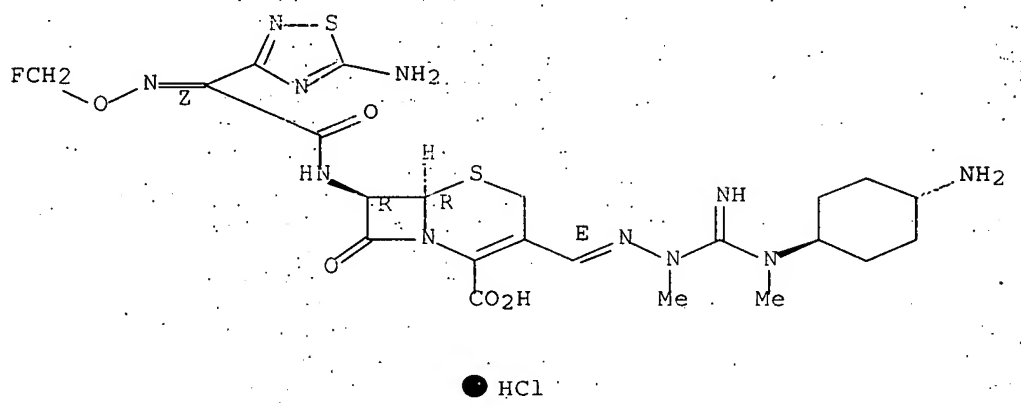
RN 650590-29-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)methylamino]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



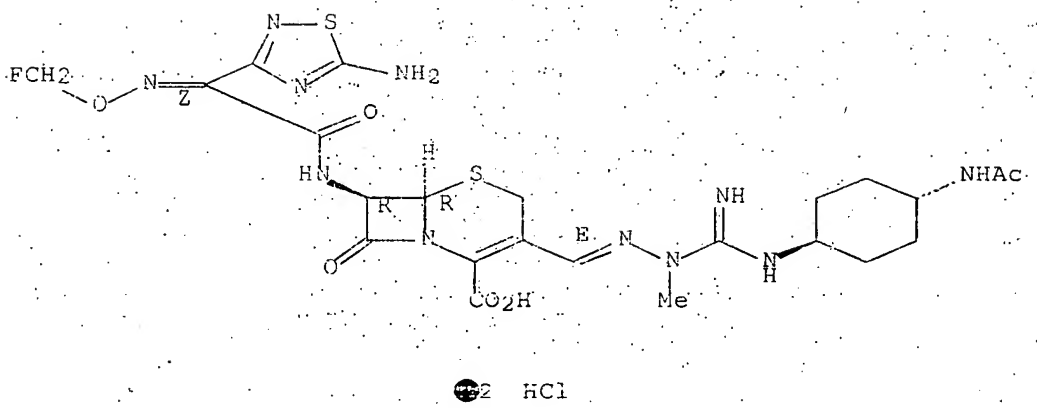
RN 650590-31-1 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)methylamino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 650590-33-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[[trans-4-(acetylamino)cyclohexyl]amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, dihydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

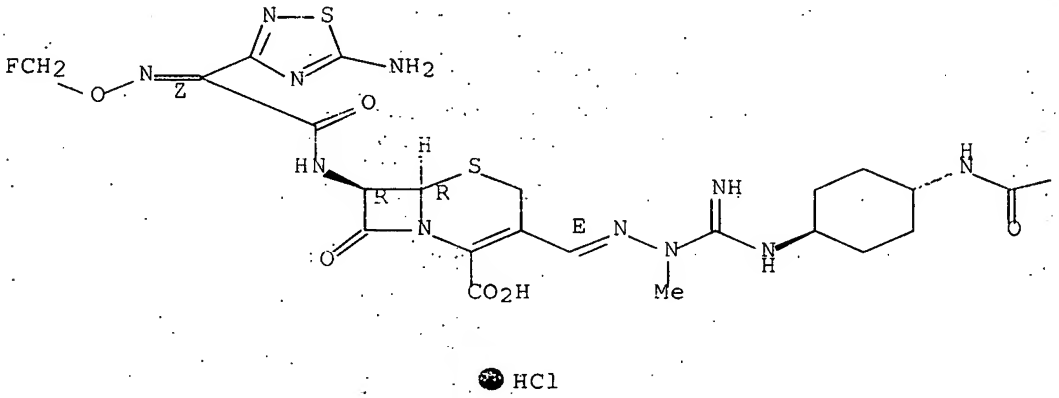


2 HCl

RN 650590-35-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[[[trans-4-(benzoylamino)cyclohexyl]amino]iminomethyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



HCl

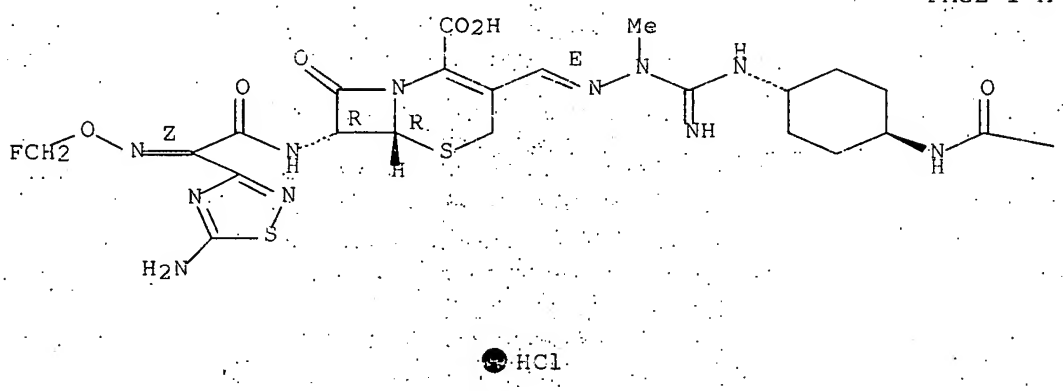
PAGE 1-B

Ph

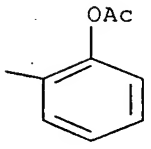
RN 650590-37-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[[trans-4-[[2-(acetyloxy)benzoyl]amino]cyclohexyl]amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



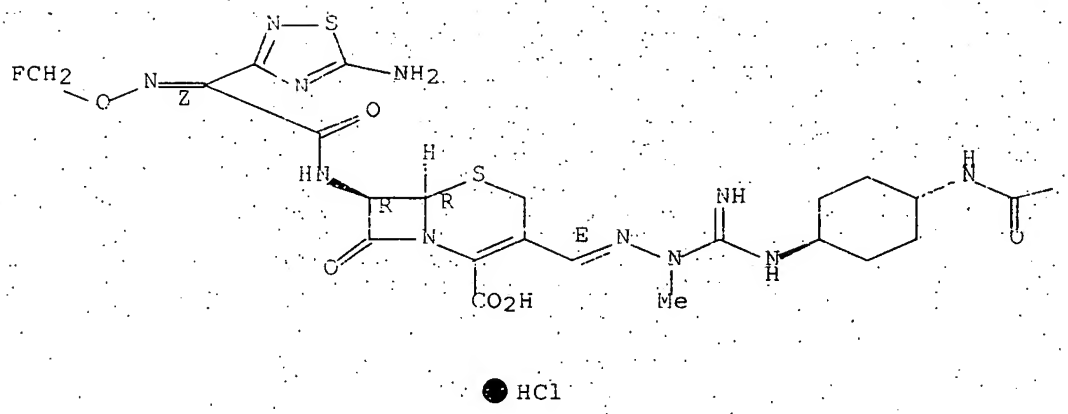
PAGE 1-B



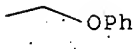
RN 650590-39-9 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[imino[[trans-4-[(phenoxyacetyl)amino]cyclohexyl]amino]methyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



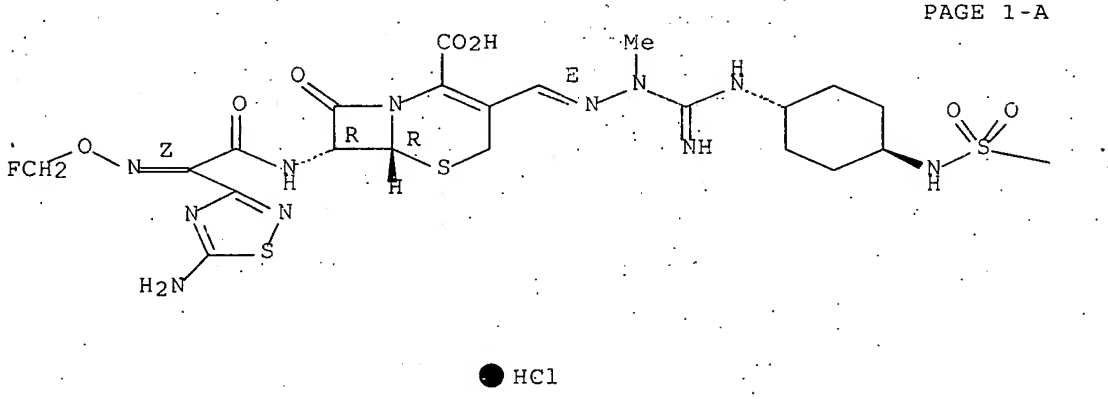
PAGE 1-B



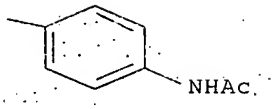
RN 650590-41-3 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[[trans-4-[[[4-(acetylamino)phenyl]sulfonyl]amino]cyclohexyl]amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



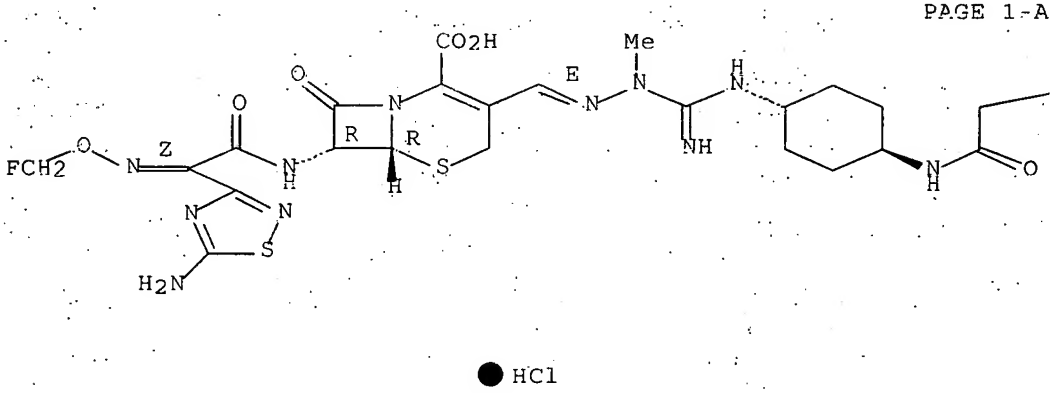
PAGE 1-B



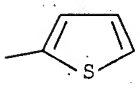
RN 650590-43-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[[imino[[trans-4-[(2-thienylacetyl)amino]cyclohexyl]amino]methyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



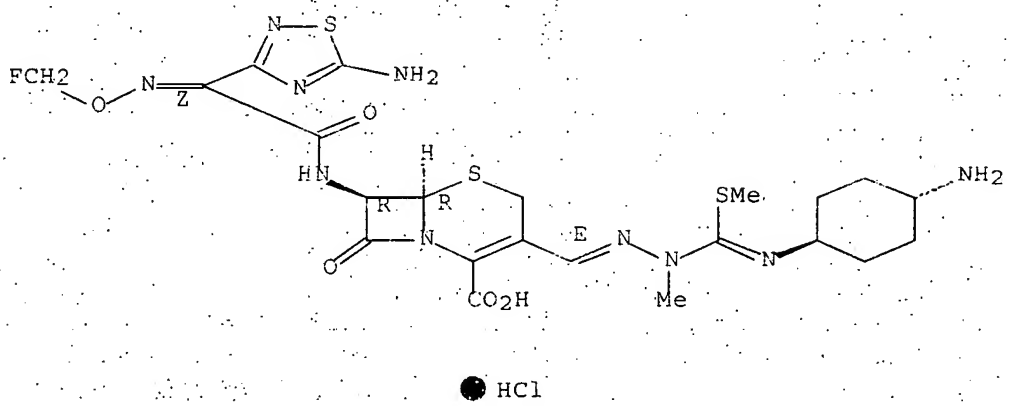
PAGE 1-B



RN 650590-45-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)imino](methylthio)methyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-

yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

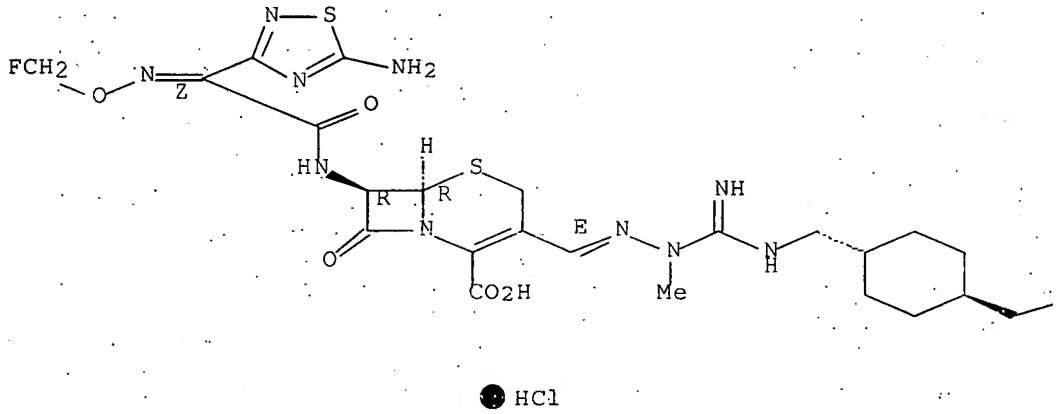
Absolute stereochemistry.
Double bond geometry as described by E or Z.



RN 650590-47-9 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[[[trans-4-(aminomethyl)cyclohexyl]methyl]amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)

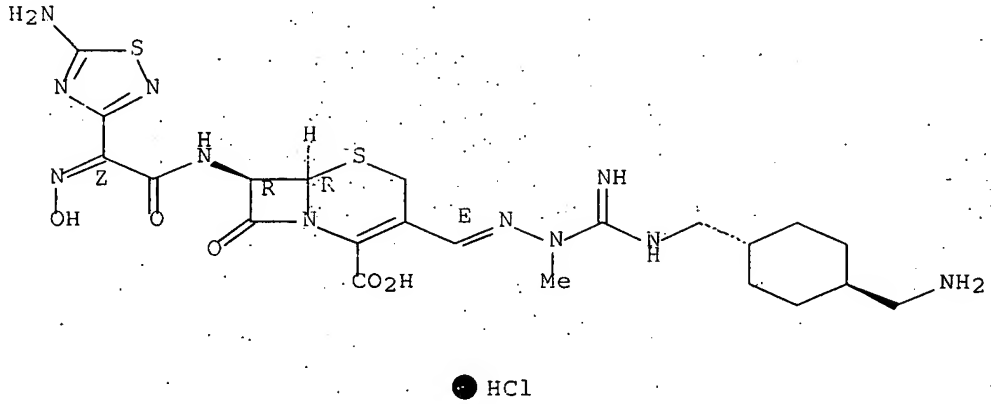
Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



RN 650590-49-1 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[[[trans-4-(aminomethyl)cyclohexyl]methyl]amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)(hydroxyimino)acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

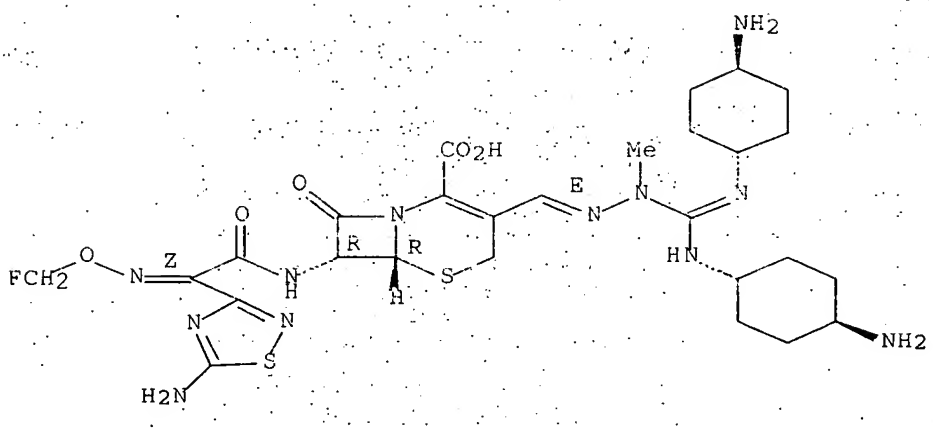
Absolute stereochemistry.
Double bond geometry as shown.



RN 650590-53-7 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino][(trans-4-aminocyclohexyl)imino]methyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A

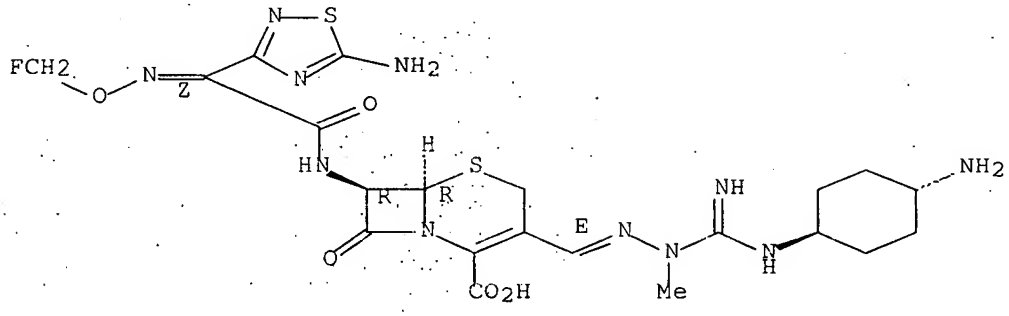


PAGE 2-A

● HCl

IT *650590-51-5*
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of acylamino(methylhydrazono)methylcephalosporin derivs. as antimicrobial agents and their intermediates)
RN 650590-51-5 HCAPLUS
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(E)-[[[(trans-4-aminocyclohexyl)amino]iminomethyl]methylhydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



● 3 HCl

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L3         105 SEA SSS FUL L1

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